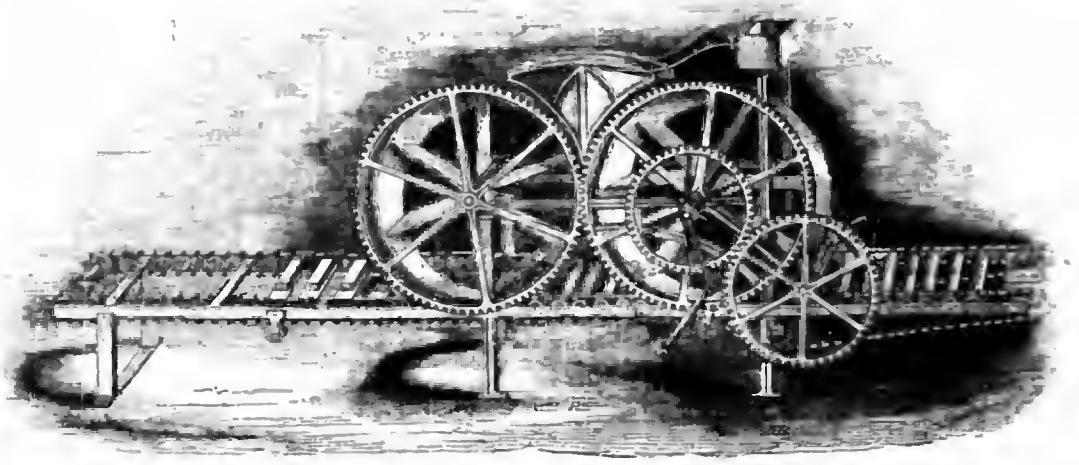
BRICK AND TILE MACHINES.

Our columns of this day record the account of a strange outbreak and conflict in Manchester among the brickmakers, the particulars of which, and as to the cause originating it, we have little or no information upon. We dare say the matter grows out of some real ground of complaint; but it will be laid hold of by many, as an argument against the labourers, and turned to a use the very opposite of that which, in our judgment, the case calls for. Many will look upon the ingenious inventions which we now give a description and illustration of, as a fitting visitation; they will argue from the labourers' outbreak to the brickmaking machine, as from cause to effect, and assign for the stimulus of invention the imposed necessity arising out of this rebellious conduct of the brickmakers. We, who are lookers on upon threatened loosenings and rendings of the ties that bind society together, see far different causes of progress and change, and we are not indisposed to hail these apparently threatening agents, in certain cases, as the best auxiliaries and friends of labour. Brute labour, and the brute intellect which too frequently accompanies it, is not to be coveted as an element in the social constitution of this extraordinary country.

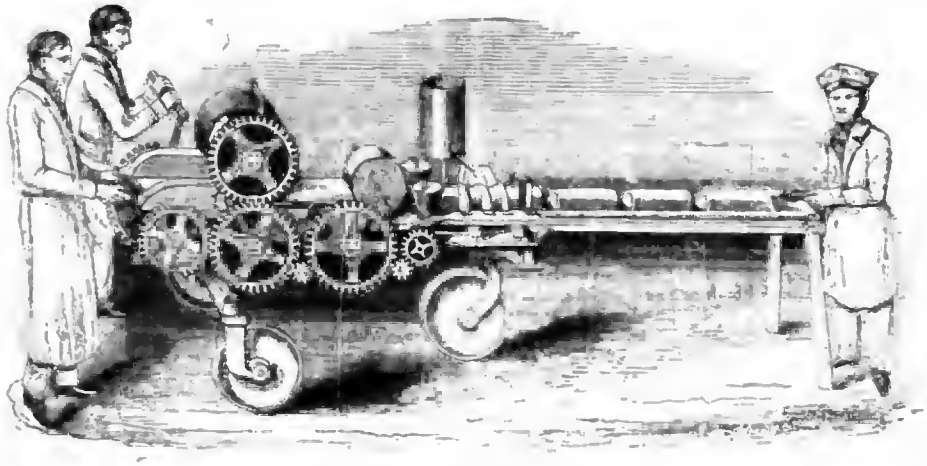
Frequently have our hearts bled to see the degrading labour to which the brick-field has subjected our species, and most revolting of all, to see women put to the drudgery of horses and engines; little children too, who in a country like this should be at school, disguised past recognition in the mixed sweat and plasterings of clay and mud which encumbered their attenuated frames, and we wished in our hearts frequently that machinery could have its unimpeded course, rather than such violations of propriety should offend the eye and the understanding. The brick-yard should be what we have pleaded for on a former occasion, an artistic manufactory; and those who have seen the specimens that have greeted our eyes of late, of beautiful products from the kiln and the pottery, and who will glance over the designs of ancient brick and tile-work, will readily understand us that it can be such. All that toilsome heavy drudgery of excavating and preparing the clay, the moulding and pressing of the bricks, may and ought to be done by the same process as we propel or draw our carts, with yoked beasts, or by the untiring agency of steam, and we are glad to have the opportunity of calling attention to these inventions of the Marquis of Tweeddale, as admirably adapted for accomplishing purposes so congenial to humanity.

The machines act with great simplicity, yet with the utmost accuracy. The one used for tile-making consists mainly of two iron cylinders, over which webs or bands of mole-skin or other suitable cloth are made to pass. By this arrangement the clay is pressed into a web of uniform thickness, without adhering to the cylinders. It is then carried over a covered wheel, slightly curved on the rim, and begins to assume the bent shape of a draining-tile; a tendency which is increased by several unexpensive but effectual contrivances: and the tiles are polished and finished by passing through three graduated iron moulds of horse-shoe form; being at the same time moistened from a cistern on the top of the machine, as shewn below. The tiles are then cut off with mathematical accuracy, to such length as may be required (fifteen inches being generally recommended as the most profitable and convenient), and they are carried on to any requisite distance by an endless web; and, from thence are placed by two lads into the drying-shelves. Flat tiles, or soles, are formed in precisely the same manner; except that they are partially divided into two portions while passing through the moulds, the quantity of clay required for one draining-tile being the same as for two soles.



At first, these machines were constructed on a larger scale, and, where the demand is great, that method is preferred; but by recent improvements, the apparatus is brought down to the power of a common labourer, not necessarily acquainted with the process of tile-making, and it is thus made available in the drainage of private estates, where even only a moderate supply is required. The draining-tiles are made at the rate of about fifteen per minute, and are completely formed and finished by the operation, this machine being the only one capable of effecting that object. It is stated the articles are much better in quality and cheaper than those made in any other way.

The great body of our readers are, however, more interested in the *brick* machinery; and we would earnestly recommend them to satisfy themselves of the value of Lord Tweeddale's discovery, especially, now that the machine is reduced to the simplicity of being worked by hand, and by ordinary labourers and boys. All previous attempts to manufacture bricks by machinery have failed, because it has always been thought necessary to use *moulds* for the formation of the article. The Tweeddale machinery is quite independent of this process, as the bricks take their shape in descending between the cylinders, being cut off quite clean by a very ingenious arrangement, and received on *pallet-boards* which are removed for drying in the usual way.



Both the brick and tile machines are free from the usual objection of being intricate. They are, on the contrary, exceedingly easy in operation, portable, and not liable to derangement. The machines will produce any number of goods, the quantity being governed only by the facilities for removal when made; and we really consider the discovery of this excellent principle to be of the utmost importance to the building world.

A company has been formed, with numerous establishments of their own; but they also grant licenses to the trade and to private individuals.